
Mortar Employment

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A mortar platoon leader has to be technically proficient with his mortars, but he also has a critical role as the commander's primary advisor on mortar tactics. If you are a mortar platoon leader, I would like to offer you some lessons—from my experience as an observer-controller at the Joint Readiness Training Center (JRTC)—that you may not have learned in the Infantry Mortar Platoon Course:

Selling the Mortar Platoon

First, since few unit commanders, S-3s, and fire support officers (FSOs) are familiar with the tactical employment of mortars, you have to "sell" your platoon's capabilities. Describe what your mortar fires can do to the enemy and how the commander can capitalize on the effects of those fires to support his scheme of maneuver.

Many commanders seem to believe, for example, that if they assign the mortars a firing position in range of a unit they have coordinated for fire support. But the location of a firing position is almost irrelevant to fire support planning. What counts is the effect a commander wants the mortar fires to achieve.

Unfortunately, though, our current operations order (OPORD) format does not include a paragraph for the commander's intent for fire support. If you don't ask your commander what he wants to happen to the enemy, you will be left to use your own judgment and will frequently be forgotten during the battle.

When you attend the battalion OPORD briefing, don't be satisfied with guidance that addresses only a firing position. Ask the commander to describe how he intends to use the effects of the fires. And take the section sergeant with you to the OPORD briefing so he can plan for the technical aspects of firing the missions.

Do not expect the FSO to provide command guidance for the mortars. All you should expect him to do is plan and coordinate mortar target lists (with overlays), fire missions, and clearance of fires. All other guidance should come from either the commander or the S-3. When it comes to movement and integration into the battalion fight, the mortars should be treated just like an infantry company, and should be addressed in the subunit paragraph of the OPORD and included in the battalion backbriefs.

It is much better to coordinate in person than by radio. If the situation permits, visit the tactical operations center or the tactical command post often to keep abreast of the battle and coordinate the best ways of using mortar fires. Focus on coordinating with the FSE (fire support element) to maintain a current target list. As the battlefield changes, coordinate with the battalion commander and the S-3; they are the ones who integrate the mortars into the battle.

Coordinating for fire support is more than just asking a busy S-3 if there are any changes to the order and then leaving thinking you have a current plan. (Unfortunately, not many commanders and S-3s know the kind of

information mortarmen need to support the battle. And, unlike the artillery, you do not have a staff to do any planning.) Instead, approach the battalion staff with a list of questions and issues, and be prepared to discuss your capabilities and limitations for each specific mission. Again, take the section sergeant with you on these coordination visits.

Don't rely exclusively on the battalion FSO for target lists and fire missions. Go to the companies and talk to the commanders about fire support. Discuss how they can use the effects of your fires to accomplish their missions. Once the companies and platoons make contact with the enemy, you will receive more calls for fire from them than you will receive for planned fires from the battalion FSO.

Besides firing positions, radio frequencies, and target lists, discuss such firing details as the time delay between the initial call for fire and the first round hit (generally longer than five minutes at the JRTC), adjustment procedures, clearance of fire procedures, the commanders' intent for fire for effect, and the assessment of the enemy situation in the commanders' areas of operation. Most important, obtain patrol routes, ambush positions, proposed command post locations, and the anticipated times of movement and occupation. This is one of the few ways to ensure that your mortars will be responsive to the commanders' calls for fire.

Don't forget to coordinate with the units that do not have forward observers (FOs)—scouts, antiarmor platoon,

aviators, engineers, and attached tanks. The only link these units have with the mortars is often the battalion command radio net. If the mortars are to provide support for these units, you need to coordinate with the battalion commander regarding procedures and radio nets.

Using Priority Targets

Priority of fires (POF) does not mean a lot for mortars at the JRTC, because there are not many competing calls for fire. Instead, POF has become an aid in the selection of concealed positions to hide the platoon, because it ensures that the mortars are at least oriented in the direction of the POF unit.

Generally, at the JRTC, a company with an artillery POF will not even call the battalion mortars for fire missions. All three platoons in a company with FA POF call for artillery first. This means that only two of the nine rifle squads in a search and attack operation will get any type of fire support: The first squad in contact will get artillery fire support and the remaining squads will share 60mm mortar fire support. The deletion of battalion mortars from this company's fire support assets is partially due to poor procedures during communication exercises (COMEXs) and partially due to the current procedure of assigning POF to a company instead of to a target description.

POF would be more useful for the mortars if it corresponded to the commander's high payoff targets, such as supply points, enemy mortar sites, command and control sites, or air defense positions) could have artillery POF.

Priority targets are a way of reducing the response time for mortar fire support, since the mortars are already laid on the target. As you coordinate with the company commanders, make sure the priority targets correspond to the scheme of maneuver. Priority targets are not responsive if they are plotted against a terrain feature in center sector and not on enemy targets or



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along the route of movement; once units are in the woods, they cannot see the terrain feature to make the needed adjustments.

The priority for a target should have an anticipated start and stop time and a plan for shifting the priority—once the target is no longer relevant—to a new target that supports the maneuver. It is quite common at the JRTC to see mortars still laid on a priority target 24 to 48 hours after a company has passed through the area of operations (AO).

A technique that works is to have the priority target 500 to 1,000 meters

forward of a company's lead element and then to keep adjusting the target to correspond to the movement along a specified direction of attack.

Be careful of matrices. A fire support matrix is useful only as a tool for controlling fires; it is not intended as a final product for fire support planning.

A fire support matrix generally indicates how mortar fires will be integrated or synchronized with maneuver. (Sometimes, commanders and S-3s accept matrices and target lists as final products because the mortar men have not asked for the commander's

intent for fire support.) Most matrices that indicate POF by phase or phase lines do not list a time when the POF will change or who will notify the mortars when it does. Also, POF for the mortars does little more than help obtain a direction of fire and resolve the conflict when there are competing calls for fire.

During the search and attack phase, fires must be integrated and synchronized. In this two-part mission, squads and platoons generally conduct the search, and they are the ones who can normally control fires best during chance contacts. They need almost instant fire support that they can easily adjust to fix the enemy. The company mortars are the most responsive, but single 81mm mortars or mortar sections in support of designated squads can be just as responsive.

Once the enemy has been found, and the company or battalion is preparing to attack, coordinated fires from the battalion mortars and the artillery can be most effective. But designating the battalion mortar platoon to provide POF to a specified company during the search phase has been a poor technique for integrating fires with maneuver. The company FSOs normally do not coordinate fires with the squad and platoon patrols, and the mortars remain laid on a terrain feature in the center of the company AO. Also, if a unit without mortar or artillery POF makes contact with a high-payoff target, battalion FSOs frequently forget to adjust the mortar fires to support the company's attack.

One of the better uses of mortar fires during the search phase is to suppress the enemy and fix him when the patrols make initial contact. A squad size patrol that makes contact with a small enemy element will have to adjust an excessive number of mortar rounds on the enemy force to destroy it, but the soldiers in the patrol can synchronize the mortar fires to fix the enemy while they maneuver to destroy or capture his force.

To synchronize mortar fires with their maneuver, the squads need responsive communications with the

mortars. A successful technique during the search phase is to have the company with priority of mortar fire transfer that priority to designated squads or patrols. Squads in an ambush posture can also synchronize mortar fires so they will seal off kill zones or illuminate an area.

Once the enemy has been found and the unit is preparing to attack him, POF can be reassigned so that all fires are massed on the target area. POF during a search and attack should not just be split equitably among the companies. Instead, the mortar platoon POF (perhaps even section POF) should be assigned to the squads that are designated to make contact during their patrols. Then, once the enemy has been found, the POF can be shifted to support the attack.

Mortar illumination and white phosphorous rounds can play an important role as well. Although night vision goggles are excellent, units that illuminate the battlefield at night during contacts shoot better, more often, and cause more damage to the enemy. And if there is a good chance of causing civilian casualties, you may want to use illumination for positive target identification.

Although WP rounds are excellent for marking locations for close air support (CAS) and attack helicopters, they are seldom used this way. One consideration for WP rounds is that they are more lethal than high-explosive (HE) rounds. They can establish an initial smoke screen but are best used if the WP is fired on an enemy position—not to cover a friendly unit's movement.

Communicating

Good communications also require planning and coordination. Although the mortars are usually described as the commander's most responsive fire support asset, surprisingly few FOs or FSOs monitor the mortar platoon frequency. The battalion mortars compete with the artillery nets and the 60mm mortar frequencies on the few FO and FSO radios. Normally, at the JRTC, only the battalion FSO and the

company with 81mm mortar POF monitor the mortar platoon frequency. Even the FOs monitor the artillery frequency instead of their own 60mm mortar net. As a result, the mortars are inaccessible to the companies and platoons.

As part of the planning and coordination process, you need to coordinate with the FSO, the S-3, and the signal officer and prepare a communication scheme that supports the mission. All units must be able to call for mortar fires and must know the procedures (frequencies, clearances, retransmission nets, and the like). This is important because few FSOs or FOs monitor the mortar platoon's frequency. The fire support communication diagram should be included in Paragraph 5 of the battalion OPORD.

To make the fire support communication net work, you need to conduct a communication exercise (COMEX) as a three-phase rehearsal.

During Phase I, everyone conducts a serviceability check on the same frequency to ensure that all radios and Vinson devices are serviceable and on the correct Vinson variable.

During Phase II, the units put their assigned frequencies on their radios and practice such skills as remote rekeying of the Vinson devices, retransmission procedures, frequency presets on the radios, and voice versus digital fire missions.

Finally, during Phase III, all units on the fire support nets rehearse their calls for fire for both planned targets and targets of opportunity, emphasizing clearance of fires and switching radio nets to contact 60mm mortars, battalion mortars, artillery, close air support, and attack helicopters. Make sure the units with no FOs participate as well. (Unfortunately, few units at the JRTC have rehearsed anything beyond Phase I, and poor communication consistently delays fire support.)

Plan to monitor the battalion command net. Doctrinally, the mortars monitor both their platoon net and the battalion command net. In practice, the fire direction center (FDC) is very responsive on the platoon net—anyone

who is on the net is generally calling the mortars—but the platoon is not as responsive to the battalion command net. A radio telephone operator is assigned to respond on the battalion command net in case the platoon is called.

The only way for mortarmen to stay abreast of the current battle situation and the status of the maneuver units is to monitor and record all the messages on the battalion command net. Then, you will be able to ensure that your mortars can range the units and are in a position to provide synchronized fires.

Effective Mortar Planning

Prepare an effective mortar plan. Too many mortar OPODs address only a firing position, a time of occupation, a POF, a DOF, and some coordinating instructions. But these orders have no direct bearing on fighting an enemy. An effective mortar OPOD must be based on an analysis of METT-T (mission, enemy, terrain, troops, and time) with the most important issue being the effects on the enemy.

To be effective, plans must also address the way the mortar platoon will protect itself from enemy attacks and the way the mortar fires will be synchronized with maneuver. A mortar platoon should be able to fight off enemy probes and squads. If the enemy has only a few mortars operating independently and is expected to be in elements of squad size or smaller (as in the JRTC's low intensity conflict scenario), it does not make sense for a mortar platoon to operate as split sections to survive enemy indirect fires. Split sections may protect the platoon from enemy artillery barrages (you don't expect barrages from single mortars), but the sections are more likely to be destroyed piecemeal by small enemy teams. If the enemy has no close air support or artillery, preparing a hardened position similar to a small firebase may protect the force from enemy probes. But if the enemy does have CAS, setting up in an open

field could be disastrous for the platoon. In short, you have to deduce the enemy's capabilities and plan to protect the force from them.

Remember that not all fires are effective. You must determine how the effects of your fires can cause the most damage to the enemy and then make sure your fire plans support the scheme of maneuver. It is meaningless to say, "Fire a mortar preparation on an enemy bunker system to damage the enemy." Mortar fires on a dug-in position will have little effect, compared to the number of rounds that will be expended.

The term "prep fires" does little to help mortarmen synchronize their fires with the ground attack. Similarly, guidance for "prep fires" does little more than direct the mortarmen to fire onto a grid coordinate. It does not address whether the rounds are expected to suppress, neutralize, or destroy the enemy. Placing preparation fires onto a bunker system is not likely to do more than force the enemy to keep his head down. In any case, preparation fire is not effective unless the infantry uses it to maneuver onto the objective.

"Attrition" is also a meaningless term for the mortars. It can mean causing one enemy casualty or 20, but with a significant difference in the ammunition expended. To plan for effective fire support, you have to get clearer guidance from the commander, such as the nature of the target and the desired effect.

The planning process must also include load plans for your vehicles. A platoon with seven HMMWVs (high mobility multipurpose wheeled vehicles) and two trailers can haul almost 500 boxed rounds of 81mm ammunition or 900 canister rounds. The only way to manage such quantities of ammunition—along with the mortar, personal equipment, and the assigned soldiers—is to prepare vehicle load plans.

Squad vehicles need to be self sustaining. Too often, when key vehicles are destroyed the platoon loses all its communication wire, all of the FDC equipment, or all of one category of ammunition because the load plans

did not include cross-loading.

Prepare the FDC to monitor the battle. It should include map boards that have the current battalion graphics indicating unit locations and planned targets. Planned targets should also be entered in the mortar ballistic computer (MBC), and the FDC should have a journal in which to record all radio transmissions.

The FDC staff members should be proficient at tracking the battle. They should show initiative and ask the companies for status reports instead of relying on the units to call them. Many units at the JRTC have failed to prepare any map boards for fear of an operations security compromise if the FDC vehicle is captured. A good FDC crew is cross-trained so that there will be no shortcomings in case of casualties or when one shift is sleeping. The entire mortar platoon should be proficient at FDC duties.

Plan to care for your casualties. Designate casualty collection points inside the platoon perimeter. Task several combat lifesaver qualified soldiers to care for the wounded.

Prepare for continuous security that corresponds to the enemy threat. At the same time, prepare a sleep plan while maintaining a mortar firing capability; don't keep everyone up all day and then expect them to be able to stay up all night as well, especially in the FDC. If the platoon has only four soldiers who are trained on the MBC, for example, the platoon will have difficulty sustaining split section operations while maintaining computer checks. If a squad needs two soldiers standing by for its fire missions, it needs a third (preferably the squad leader) to check the data.

Many routine tasks can be simplified by good written SOPs that every soldier in the platoon understands. SOPs should state priorities of work, procedures for the advance party, occupation drills, stand-to procedures, sleep plans, and the like. Even the best SOPs need to be rehearsed often.

Rehearsals can help identify and correct many planning shortcomings. Just as the most important rehearsals in

a rifle platoon are actions on the objective, the most important mortar rehearsals are the planned fire missions. Ideally, these rehearsals are part of the COMEX, and they include everyone involved in the fire missions. But some have observed at the JRTC that most mortarmen do not know what to rehearse or how to rehearse. Too often, rehearsals consist of nothing more than mortar crew drills that have no relationship to tasks, conditions, or standards.

Not surprisingly, most of the contingencies a platoon is likely to face on the battlefield are included in the infantry mission training plans, along with the tasks, conditions, and standards. To conduct effective rehearsals, you need to use your imagination and vary the conditions to correspond to both the enemy threat and the available men and equipment, conduct the rehearsal on terrain similar to that in the area of operations, and perform it to standard. If time permits, rehearse the contingencies in which the enemy is likely to cause the platoon the most damage—such as convoy ambushes, contacts during leaders' reconnaissances, and attacks on the mortar position.

Once you have established the standards, don't let them slide. If you coordinate with the company that has your POF and agree that your first adjustment round will hit in less than two minutes, you may have to conduct daily rehearsals to make sure you can maintain that standard. Some standards are easy to maintain if the entire mortar squad is standing around the mortar, but these same standards may not be met if some of the soldiers have been sent out on security and others are sleeping.

Prepare and rehearse contingency plans for protecting the platoon's vehicles during movement. Mortar vehicles are among the easiest to ambush because of their lack of security and the bad habit of leaving the canopies over the beds of the HMMWVs. Mortars are not equipped with machineguns to protect themselves during convoy movements. Three enemy soldiers can easily destroy the

entire mortar platoon in an ambush.

Success for mortars can be measured by the percentage of effective fire missions and by the ability to protect the platoon. Plans that are tactically and technically correct and that have been rehearsed help to ensure success. Obviously, a platoon that has an excellent plan but can't adjust its fires onto the enemy contributes little to a battalion fight. Similarly, a platoon that has adjusted fires onto the enemy but is caught sleeping and is destroyed by an enemy squad makes no contribution to the battalion.

Do not select sites on a "drive by" basis. Site selection is more than just finding an open field with some trees in which to hide the HMMWVs. First, if you can't verify the location of the tentative position within 100 meters, you may need to find a new site. Frequently at the JRTC, mortar platoons are tasked to airland at night and set up the mortars on the edge of a dirt airstrip. Many of them end up wandering the landing zone all night looking for something to use as a reference point. Conducting daylight reconnaissance to select and verify the location of a firing position will improve the platoon's ability to deliver accurate fires.

Next, a firing position should meet the following eight criteria—range, supports the commander's intent, supports communications, has mask and overhead clearance, can be defended by the mortar platoon, provides cover and concealment, is supported by routes, and has soil firm enough to support the vehicles and the base plate. Sometimes a platoon can compensate for these deficiencies—by emplacing mines, for example, to make a position defensible or by digging Stage III positions for cover. But if a deficiency can't be corrected, find a new position.

As much as possible, have the POF unit register your mortars after you occupy a new position, and re-register as often as necessary. This increases your accuracy and establishes the FO and mortar relationship. When mortars register for the live fire exercise at the JRTC, their initial rounds are often more than 500 meters off. When you

consider firing danger-close to a platoon in contact, being 500 meters off could be disastrous.

Walk the mortar line frequently and check the status of your mortars. Few platoon leaders do this at the JRTC, and they are frequently unaware that their mortar sights are inoperable for various reasons—condensation, incorrect data, aiming posts knocked over, or sight blocks.

To reduce the number of mortar squad errors, walk the mortar line during fire missions. Have the section sergeant walk the line frequently to check mask, overhead clearance, and firing data. Check the DOF with a compass to confirm that the aiming circle is laid properly.

The fastest way to prepare a mortar firing pit is to have an engineer small emplacement excavator (SEE) prepare holes for a Stage III position. A SEE can also dig a ramp to protect the HMMWVs, using its rear scoop and dumping the residue dirt as berms around the ramps. Stage III mortar pits should require no more than 15 minutes of SEE blade time, and HMMWV ramps should require about 20 minutes each.

Don't forget to harden the FDC vehicle, and always have the squad leader present when the SEE is excavating his position. Each squad vehicle should carry enough Class IV material to construct its positions. Ten engineer pickets, three sheets of 1/4-inch plywood, and 800 sandbags per position is a good starting point for a Class IV SOP.

Being a good mortarman is challenging. There is much more to providing fire support than sitting in an open field waiting for someone to call for fire. A good mortarman "sells" his platoon's capabilities and then trains and rehearses his unit to make sure he can meet his commitments.

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